

ATTACHMENT IV-2

MIXER EFFECTIVENESS PLAN

1. PURPOSE

The purpose of this plan is to specify a demonstration test to confirm that the mixer used in the Permittee's treatment facility provides a thorough mixing of the entire contents of the mixer and minimizes areas where reagent and waste may not adequately mix. This test involves mixing a trial batch of non-contaminated soil with concrete and dye. This plan shall be implemented upon initial use and when needed upon significant repairs including the use of non-equivalent replacement parts.

2. PROCEDURE

The following steps shall be taken to prepare the mixer effectiveness test:

- a. The following soil mixture shall be added to the mixer:
 - i. Approximately two cubic yards of soil with a gradation such that 95 percent passes the one and one-half inch sieve to the mixer; and
 - ii. Two five-gallon buckets of rock ranging in size from approximately one and a half inch to approximately six inches.
- b. The rock shall be mixed into the soil in the mixer.
- c. The weight of the soil mixture shall be recorded.
- d. Water shall be added and mixed until a slurry is formed.
- e. The weight of the soil mixture shall be recorded.
- f. Five pounds of Portland Type I cement shall be added for every 100 pounds of soil (see item b) and mixed.
- g. Ten pounds of red masonry dye shall be added and mixed.
- h. The mixture shall be discharged into forms for testing and curing.

3. EXAMINATION

The mixture shall be examined for signs of incomplete mixing and undispersed dye. The examination shall consist of the four sides and top of the cast mixture. In addition, two cores shall be taken from the mixture and examined. The cores shall have a minimum diameter of two inches and a minimum length of six inches.

- a. Satisfactory results of the examination shall be recorded when the dye is dispersed evenly throughout the mixture.
- b. Unsatisfactory results of the examination shall be recorded when the die is dispersed unevenly in the mixture. The Permittee shall perform one the following:
 - i. Revise the test procedures and perform an additional test. The Permittee may perform as many tests as required to achieve a test with acceptable mixing actions. The data and experience gained from these tests may be used as a basis to modify the permit, procedures, or equipment used by the Permittee to process waste at the treatment facility.
 - ii. The mixer may be modified or adjusted to provide a better mixing action. The data and experience gained from these tests may be used as a basis to modify the permit, procedures, or equipment used by the Permittee to process waste at the treatment facility.

4. REPORT

The suitability of the mixer shall be addressed in a written report to the Executive Secretary. This report shall include the following:

- a. The weight of the soil mixture;
- b. The weight of water added;
- c. The weight of cement added;
- d. The weight and type of dye added;
- e. The results and extent of the examinations; and

- f. A determination of the suitability of the mixer.

END OF ATTACHMENT IV-2